



The history and current situation with *Cactoblastis cactorum* in Australia

Craig Walton

City of Brisbane
1880's



Brisbane Courier Sept. 8, 1923.

PRICKLY PEAR.

COMMISSION'S REPORT.

UNIFORM ADMINISTRATION.

“A NATIONAL PROBLEM.”

Recommendations of an important nature, having as their object the control of the prickly pear pest in Queensland, are made in the report furnished by the Royal Commission appointed recently to inquire into the problem.

The chief recommendations are those suggesting the appointment of a Prickly Pear Lands Commission to administer the prickly pear lands of the State, the granting of £100,000 per annum from the consolidated revenue for 10 years, the establishment of buffer areas, a more liberal tenure of land and security of tenure to protect holders who clear pear, protection against raising of rents because of pear having been cleared, clearing conditions to be imposed in regard to freehold and leasehold land, roads and reserves, and unoccupied Crown areas, and the purchase of poison and the supplying of it at the lowest possible charge.



Chinchilla 1920's





PRICKLY PEAR INFESTED AREA - 1919

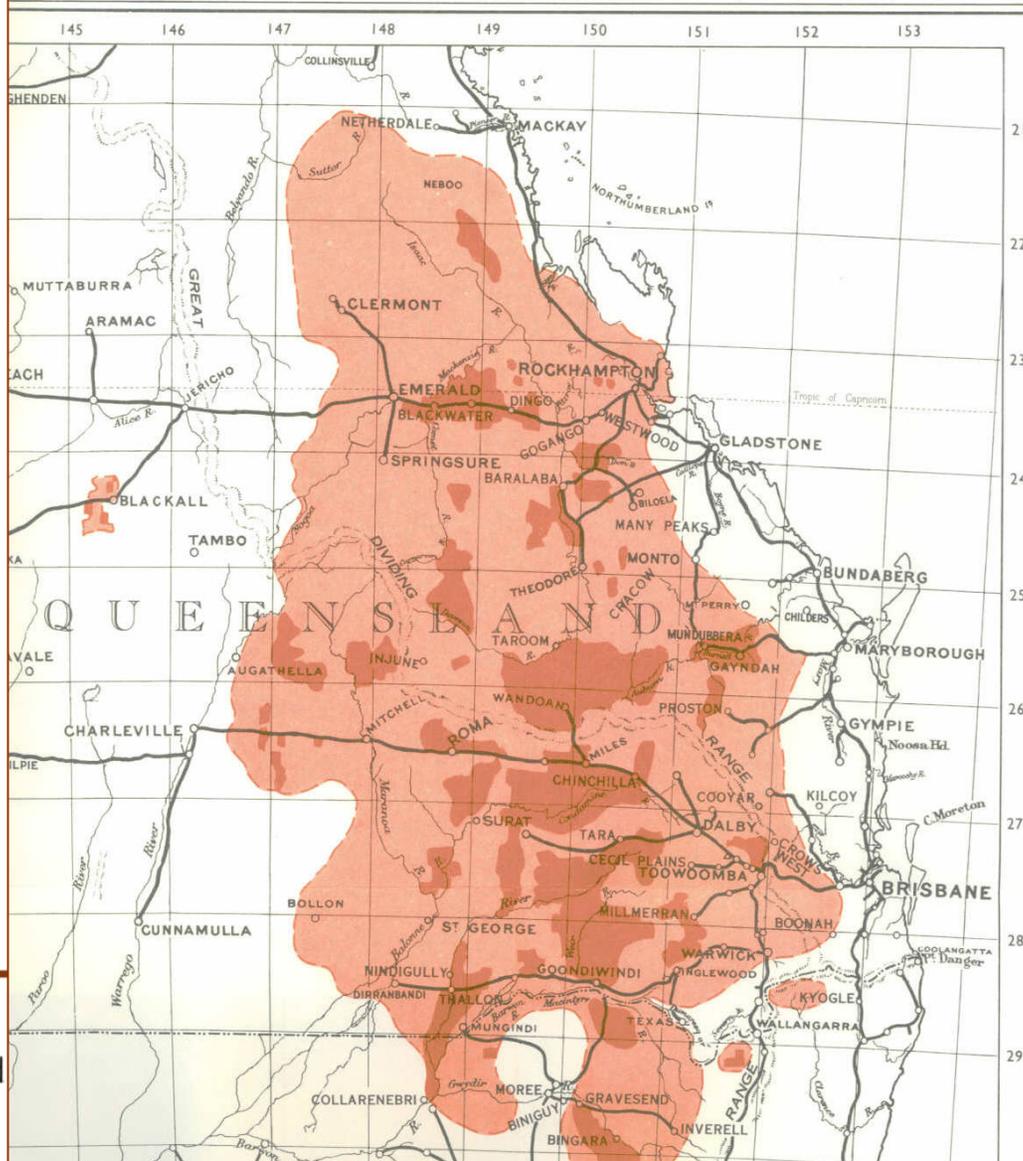
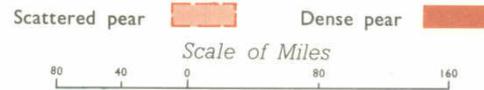
Total area 22 million acres

ALL CROPS - AUSTRALIA

Wheat	11,532,828
Hay	2,671,862
Oats	844,130
Green forage	390,876
Maize	360,072
Orchards/fruits	257,687

Total area in Australia under crops 16.8 million acres

MAP SHOWING
MAIN PRICKLY PEAR AREAS OF
QUEENSLAND AND NEW SOUTH WALES



INFESTED AREA 1924

60 million acres /
240,000 km² /
94,000 miles²

1% of Australia

5% of Queensland

[82% of the area of
Arizona]



Fig 2.—Laboratory Building.

Dulacca research 1912-17

Tens of thousands of experiments
on chemical, physical and
biological control of prickly pears



Natural Resources and Water

Managing Queensland's natural resources
... for today and tomorrow



Methods of control

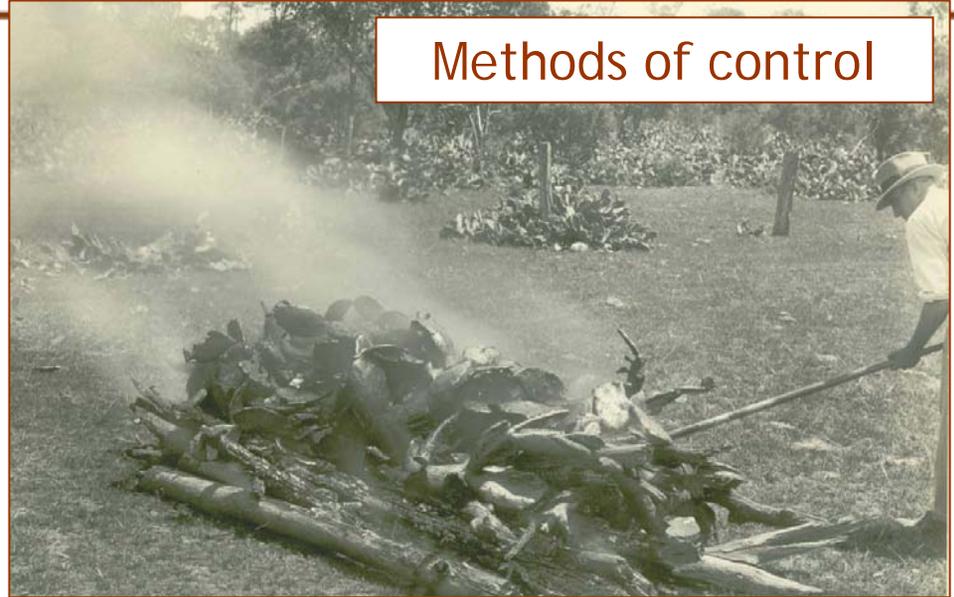


PLATE 2.—Spray cart with spraying apparatus (slightly modified).



PLATE 8.—Clump of *Opuntia monacantha* growing at Charters Towers. A few masses of *Coccus indicus* (Green) were thrown into this clump in April, 1915.

Biological control
success 1917

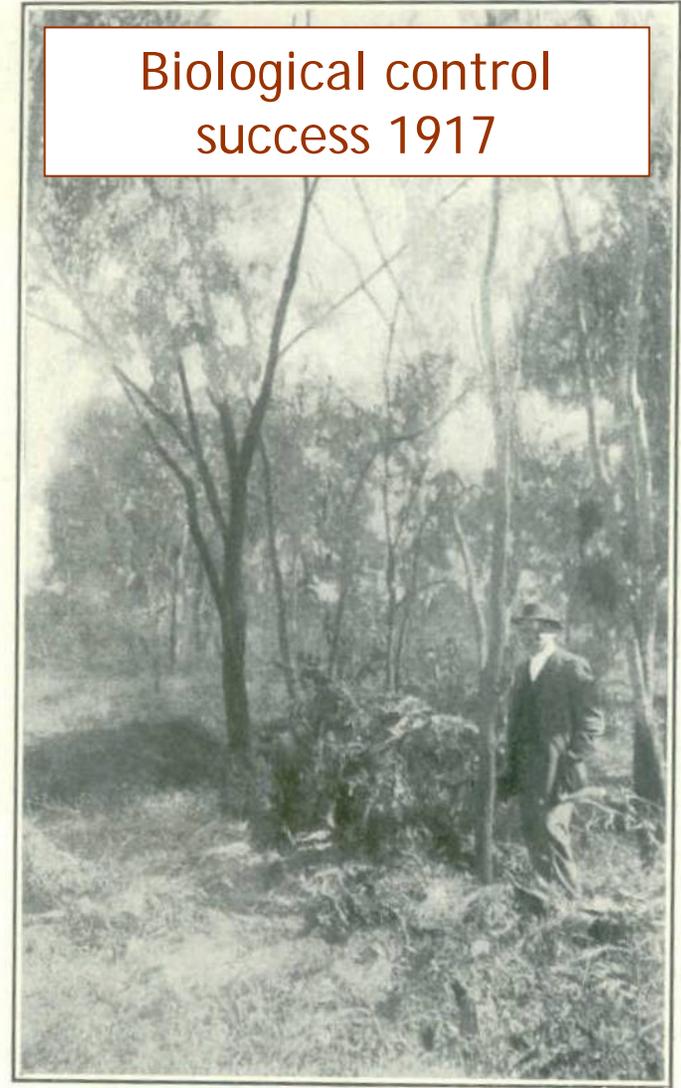
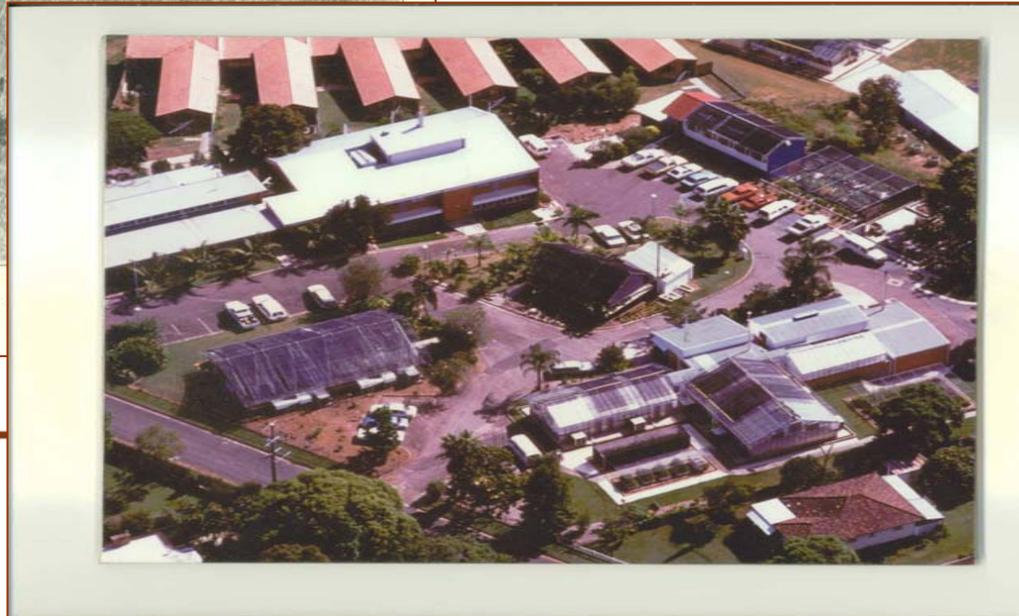


PLATE 9.—Remains of the same clump of *Opuntia monacantha* as is shown in Plate 8. The photograph was taken in June, 1916, and shows the injury done to the pear by the wild cochineal insects.



Plate 1.—The Board's Laboratory at Sherwood, near Brisbane,
insectaries and breeding cages.

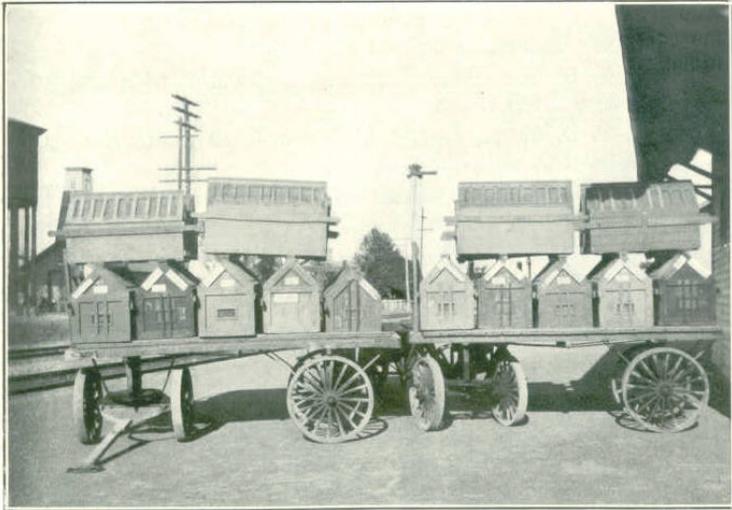


Sherwood Research Station

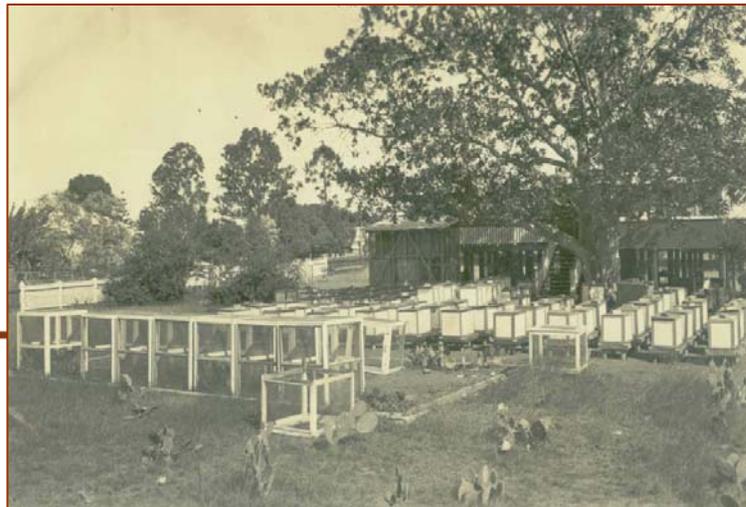
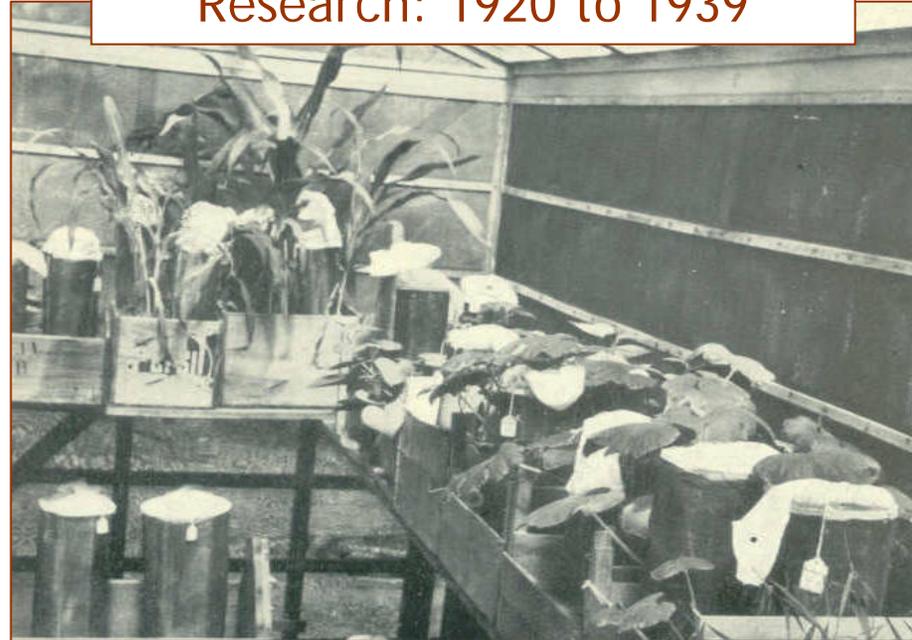
1923 and today



Research: 1920 to 1939



A consignment of Prickly-pear Insects at Uvalde, Texas, ready for despatch to Australia.

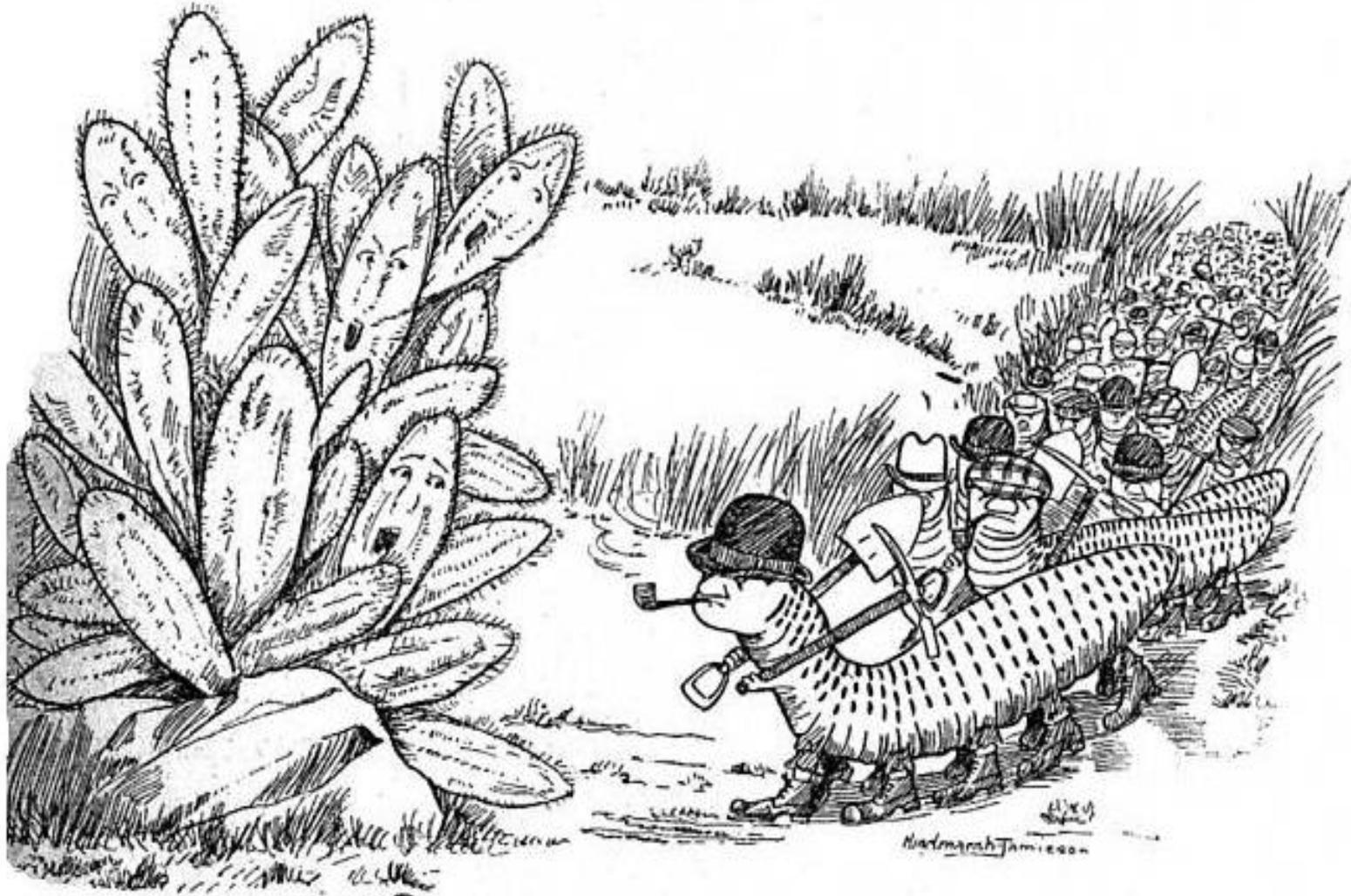




INTRODUCED BIOLOGICAL CONTROL AGENTS for all *Opuntia* spp.

- *Archlagocheirus funestus*
- *Cactoblastis cactorum*, *Cactoblastis doddi*
- *Chelinidea tabulata*, *Chelinidea vittiger*
- *Dactylopius* spp. *Dactylopius ceylonicus*, *Dactylopius ceylonicus*,
Dactylopius coccus, *Dactylopius confuses*, *Dactylopius opuntiae*,
Dactylopius tomentosus
- *Loxomorpha flavidissimalis*
- *Melitara dentata*, *Melitara prodenialis*, *Melitara doddalis*
- *Moneilema ulkei*, *Moneilema variolare*
- *Olycella junctolineella*
- *Tetranychus opuntiae*
- *Tucumania tapiacola*

ANOTHER AMERICAN INVASION

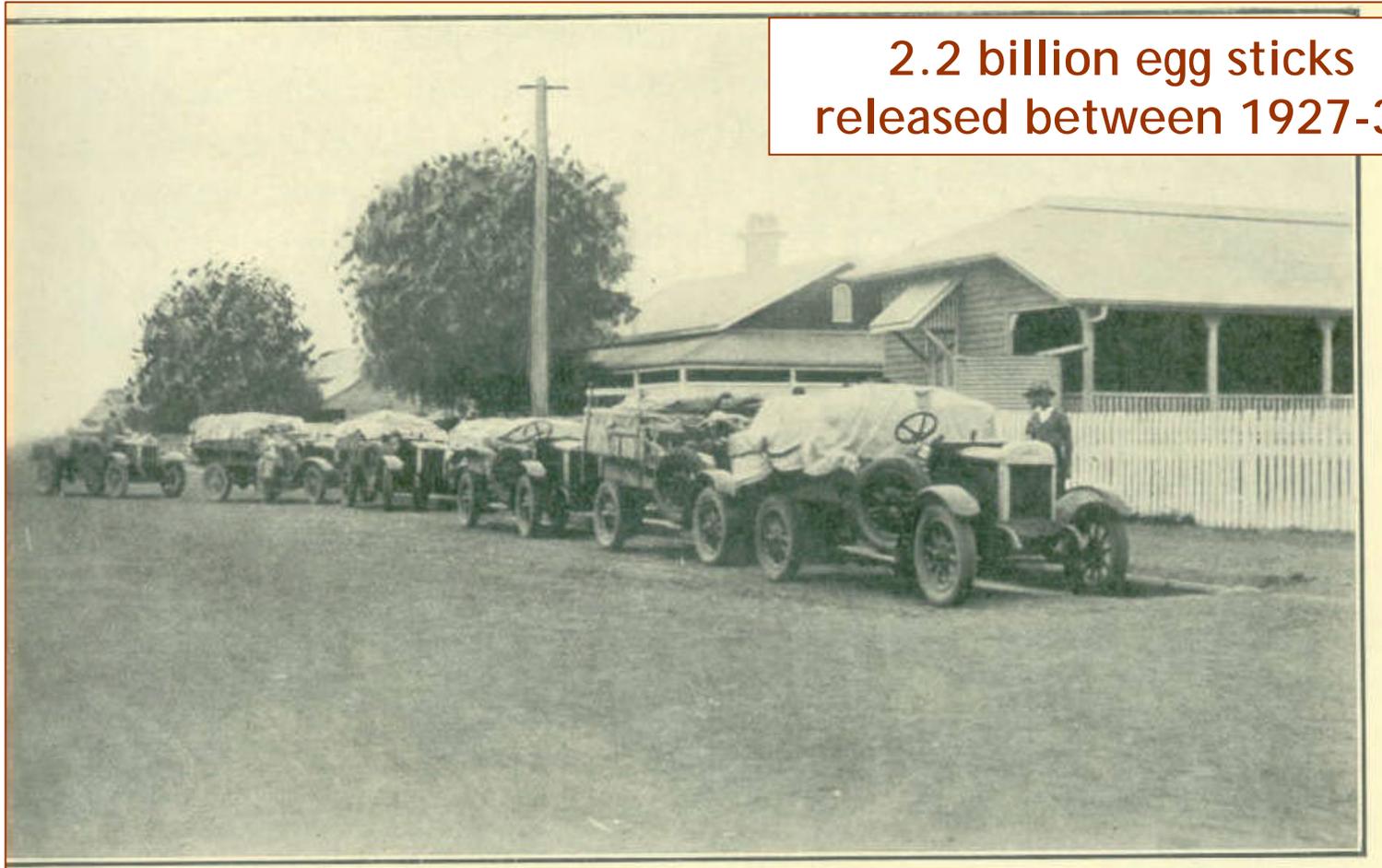


“ Gee boys, hurry on. This li'l job may look tough but I guess it'll be a mighty easy proposition for us 'Murrikans”
[Brisbane Courier 1928]





2.2 billion egg sticks
released between 1927-31



Chinchilla farm - Abandoned 1928
and 18 months later



Dulacca: 1922 and 1929



"The Brisbane Courier

9.9.1930.

VAST SUCCESS.

War Against Prickly Pear.

ERADICATING PEST.

HUGE AREAS RAPIDLY RECLAIMED.

Not only has the Prickly Pear Commission, in co-operation with the Commonwealth Pear Board, succeeded in checking the prickly pear pest, but it is reclaiming vast areas of infected territory that at one time was thought to be lost.

Much of the success has been due to the work of the cactoblastis caterpillar, which, in one area visited by a special representative of the "Courier," had infected 90 per cent. of the pear.

Telegraph:

4/9/36.

Prickly Pear Menace Has Disappeared From State

Minister Tells of Cactoblastis' Great Work

"Practically all the land over which prickly-pear had reigned supreme for many years has now been brought into production, and the remarkable change thus brought about is reflected in the general progress and betterment of the districts formerly afflicted," stated the Minister for Lands (Mr. P. Pease) to-day.

"Sufficient is now known to say definitely that the great menace of prickly-pear in Queensland is gone and what was regarded a short time ago as a most serious problem is now looked upon as just an ordinary pest of the vegetable kingdom."



Celebration and Memorials



INFECTED SPECIES

Opuntia aurantiaca, *O. dejecta*, *O. elatior*, *O. ficus-indica*,
O. humifusa, *O. paraguayensis*, *O. streptacantha*, *O. stricta*,
O. tomentosa and *O. vulgaris*

NOT KNOWN TO BE AFFECTED

O. imbricata, *O. microdasys*, *O. robusta* and *O. sulphurea*



ECONOMIC IMPACT OF CACTOBLASTIS IN AUSTRALIA

Cost on non-biological control - est £100 million in 1924

Cost of biological control program - £240,000 (1924-36) = \$700 million today [= 0.2% of chemical control costs]

Capital return in infested area in 10 years was £10 million or 25% of value of Queensland primary production

Value of agricultural production in infested area today - \$1.41 billion



CACTOBLASTIS IN AUSTRALIA TODAY

Opuntia species still occur across across most states

Few species are a problem as the agents continue to control

